

Caswell Fens Focus Area

Caswell, Maine

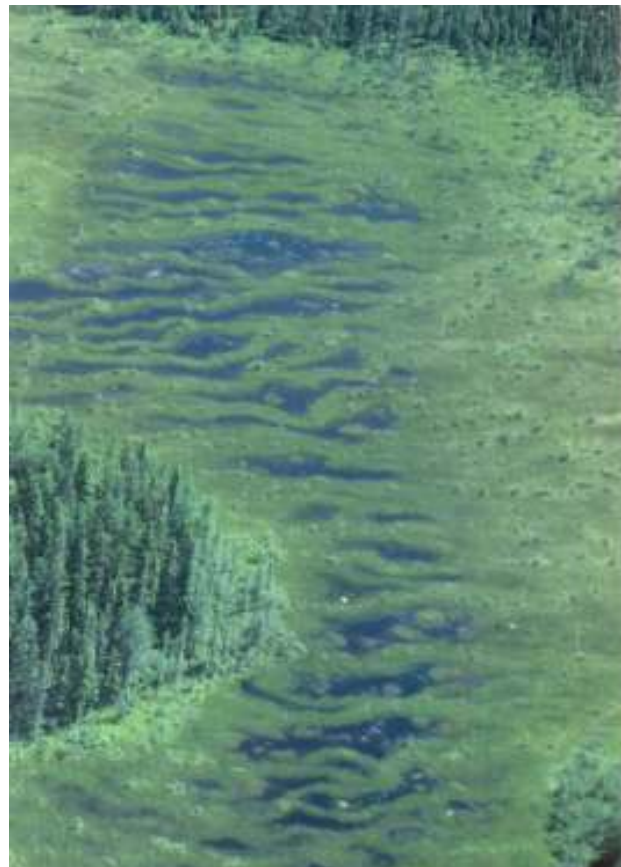


Description:

The Caswell Fens Focus Area is a low relief, forested landscape in the northeast most corner of the state with an unusually high concentration of wetlands. Wetlands occurring here include a wide diversity of types ranging from numerous small beaver impounded meadows and pools to a handful of 100 + acre open fens. The largest wetlands, Orchard Bog and Deer Lake Fen, are exemplary peatland ecosystems. The large number and variety of wetlands on this undeveloped forested landscape provides a significant amount of high value wildlife habitat.

Natural Communities and Rare Plants

Both Deer Lake Fen and Orchard Bog are examples of **Patterned Fen Ecosystems**. Patterned fens are floristically similar to unpatterned fens, but are typically found on weak slopes and feature low, roughly parallel to anastomosing, peat ridges (strings) alternating with wet hollows or shallow pools (flarks). The strings and flarks are oriented across the major slope of the peatland and at right angles to the direction of water movement. Groundwater chemistry determines whether acidic



Strings and flarks in the patterned fen at Orchard Bog.

or circumneutral fen communities predominate. In some peatland systems, patterning, also known as ribbing, only occupies a portion of the ecosystem.

Patterning is found in several parts of the Deer Lake Fen ecosystem and is intermingled with broad areas of open and lightly forested unpattered fen. Deer Lake Fen supports a number of exemplary natural communities, though none are mapped independently. For descriptive purposes, the fen can be divided into north and south lobes. Despite a broad hydrologic connection, the two lobes have different plant communities. The north lobe has a large well developed area of **Sheep Laurel - Dwarf Shrub Bog** on its east side and an extensive area of **Low Sedge - Buckbean Fen Lawn** on its west side. The south lobe is almost entirely **Sedge - Leatherleaf Fen Lawn**, with a smaller area of **Low Sedge - Buckbean Fen Lawn** in the southwest corner, an area that can be seen on air photos as having a distinctive water flow pattern. Forested areas bordering the open fens are mostly spruce - larch swamps that are narrow transition zones to the adjacent uplands. Drainage channels along stream corridors are lined with thick alder cover.

The south lobe of Deer Lake Fen supports good size populations of three rare plant species including **swamp birch** (*Betula pumila*), **moor rush** (*Juncus stygius*), and **blue-leaved sedge** (*Carex rostrata*). Swamp birch occurs mixed with low growing shrubs and sedges near an edge of the open fen, and moor rush and blue-leaved sedge occur in the small area of **Low Sedge - Buckbean Fen Lawn** that occurs in this fen.



Low Sedge - Buckbean Fen Lawn at north end of Deer Lake Fen (photograph by the Maine Natural Areas Program).

Orchard Bog, like Deer Lake Fen, is made of several separate basins or lobes that are hydrologically connected via broad wetland corridors. A large part of the site occurs adjacent to Big Black Brook Lake, and a second large area occurs to the west and includes a large area of patterned fen (pictured on first page). The patterned fen at Orchard Bog is one of the best examples of this peatland type in Maine. Also like Deer Lake Fen, Orchard Bog is made up of a number

of natural communities. The two most common types are **Sheep Laurel - Dwarf Shrub Bog** and **Sedge - Leatherleaf Fen Lawn**. Other types such as spruce - larch wooded bog, alder thicket, and low sedge - buckbean fen lawn are present but less common or in small patches. No rare plant occurrences are currently known from Orchard Bog though there is good habitat. More rare plant survey work is needed

at this site. Like some of Maine's largest bogs, Orchard Bog drains into more than one watershed. It drains into the St. John River to the north via Martin Brook and to the Aroostook River to the south via Black Brook and eventually the Madawaska River.

Wildlife

The wetlands within and surrounding both Deer Lake Fen and Orchard Bog represent hundreds of acres of significant **inland waterfowl and wading bird habitat**. Numerous small ponds and waterways are linked together between the wetlands creating a network of habitat that adds important wildlife value to the Caswell Fens Focus Area.

Rare Features Table for the Caswell Fens Focus Area:

Common Name	Scientific Name	Status	S-Rank	G-Rank
Natural Communities				
Low sedge fen	Low Sedge - Buckbean Fen Lawn	N/A	S3	GNR
Patterned fen ecosystem	Patterned Fen Ecosystem	N/A	S3	GNR
Sedge-heath fen	Sedge - Leatherleaf Fen Lawn	N/A	S4	G4G5
Dwarf shrub bog	Sheep Laurel Dwarf Shrub Bog	N/A	S4	G5
Rare Plants				
Swamp birch	<i>Betula pumila</i>	SC	S2S3	G5
Blue-leaved sedge	<i>Carex rostrata</i>	SC	S2	G5
Moor rush	<i>Juncus stygius</i> spp. <i>americanus</i>	SC	S2	G5T5
Rare Animals				
None documented				

Other Features Mapped by MDIFW:

Inland waterfowl and wading bird habitat

Protection Status:

A small corner of the focus area is owned by the state and managed by the Department of Conservation's Bureau of Public Lands. The majority of the site is privately owned.

Conservation Considerations :

- The integrity of wetlands and the processes and life forms they support including rare plants and animals are dependent on the maintenance of the current hydrology and water quality of the site. Intensive timber harvesting, vegetation clearing, soil disturbance, new roads, and development on

buffering uplands can result in greater runoff, sedimentation, and other non-point sources of pollution that can degrade the high quality natural systems that occur here.

- Preserving the natural communities and other sensitive features within the focus area will be best achieved by working to conserve the integrity of the larger natural systems in which these features occur. Conserving the larger systems will help ensure that both common and rare natural features will persist on the landscape in this part of the state.
- Towns should strive to protect inland waterfowl and wading bird habitat (IWWH) areas identified by MDIFW in low density, rural settings by identifying IWWH areas in comprehensive plans and zoning accordingly.

Visit our web site for more information on rare, threatened and endangered species!
<http://www.mainenaturalareas.org>

STATE RARITY RANKS

- S1** Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- S2** Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3** Rare in Maine (on the order of 20-100 occurrences).
- S4** Apparently secure in Maine.
- S5** Demonstrably secure in Maine.

Note: **State Ranks** are determined by the Maine Natural Areas Program.

GLOBAL RARITY RANKS

- G1** Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- G2** Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3** Globally rare (on the order of 20-100 occurrences).
- G4** Apparently secure globally.
- G5** Demonstrably secure globally.

Note: **Global Ranks** are determined by The Nature Conservancy.

STATE LEGAL STATUS FOR PLANTS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's endangered and threatened plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

- E** ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future, or federally listed as Endangered.
- T** THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.
- SC** SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.